MENOMINEE INDIAN TRIBE OF WISCONSIN
CHAIRMAN'S OFFICE
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February 16, 2016 ***Submission Via Electronic Mail***

Michigan Department of Environmental Quality
Office of Oil, Gas, and Minerals
1504 West Washington Street
Marquette, MI 49855

RE: Menominee Indian Tribe of Wisconsin – Aquila Resources Back Forty Mine Comments

Dear Mr. Joe Maki,

My name is Joan Delabreau and I serve as the Tribal Chairwoman of the Menominee Indian Tribe of Wisconsin. As you are aware, the Menominee Indian Tribe of Wisconsin is opposed to the Back Forty Mine proposal in Lake Township, Michigan. The proposed mine is situated along the banks of the Menominee River and will pose negative impacts to the Tribe's historical and cultural assets. These assets are located within the footprint of the mine and adjacent areas along the banks of the Menominee River. We are also concerned about impacts posed to the air, water, environmental, wild and aquatic life. Our comments will address each of these concerns. In addition, I have included a short synopsis of our historical, cultural, and modern-day connection to the area.

Thank you for your time. If you have any questions, feel free to contact me at (715)799-5114 or jodelabreau@mitw.org.

Sincerely,

for Joan Delabreau
Chairwoman, Menominee Tribal Legislature
Menominee Indian Tribe of Wisconsin

Enclosure: MITW Public Comments – Aquila Resources Back Forty Mine

Historical & Modern-day Connection:

The Menominee Tribe's history is unique because our origin or creation begins at the mouth of the Menominee River, a mere 60 miles east of our present Menominee Indian Reservation located in Wisconsin. This is where our five clans: ancestral Bear, Eagle, Wolf, Moose, and Crane were created. Not many tribes in this region can attest to a fact their origin place exists close to or near their present reservation. This is where our history begins.

According to early records, the Menominee lived in villages at the mouth of the Menominee River, and it was here the tribe had its beginnings. Awaehsaeh (The Great Bear) in the village where the river empties into The Bay, found himself alone. He decided to call Kine'u (Eagle/Thunderers) and said, "Eagle come to me and be my brother." While they were considering whom to call upon to join them, they saw a beaver approaching. The Beaver requested to be taken into the totem of the Thunderers, but being a woman, was called Nama' kukiu (Beaver Woman), and was adopted as a younger sister of the Thunderer. Soon afterward, as the Bear and Eagle stood on the banks of a river, they saw a stranger, the Nama'o (Sturgeon), who was adopted by the Bear as a younger brother and servant. In like manner Omas'kos (Elk) was adopted by the Thunderer as a younger brother and water-carrier.

At another time Bear was going up Wisconsin River and becoming fatigued sat down to rest. Nearby was a waterfall, from beneath which emerged Mahwaew (Wolf). While asking Bear why he was there Ota'tshia (Crane) came by. Bear called to him and said, "Crane, carry me to my people at the head of the river, and I will take you for my younger brother." As Crane was taking Bear, Wolf called out to Bear saying, "Bear take me also as a younger brother, for I am alone." This is how Crane and Wolf became younger brothers to Bear.

The Thunderers decide to visit the Bear village and ask the Bear to join them. They promised to give corn and fire in return for wild rice which was the property of the Bear and Sturgeon. From this time on the families untied into an organized body for mutual benefit.

According to these legends the Menominee came into possession of wild rice at the very inception of their tribal organization. When the Bear Clan and Eagle Clan got together to form the Tribe it was with the help of Meqnapus. To the leader of the Bear Clan Meqnapus said, "I give these things to you, and you shall always have them – the river, the fish, the wild rice and the sugar trees."

The Tribe continues to actively participate in educational and cultural activities at the site of our creation. More recently, the Tribe and City of Marinette have begun a collaboration to place educational kiosks in the area to educate on the Menominee Nation's creation and cultural connections to the area. Another example of our modern connection to the area occurred as recently as November 3, 2015 when the Tribe in cooperation with the City of Marinette, held a reseeding ceremony of wild rice at the mouth of the Menominee River.

The Menominee Nation values the oral tradition over the written word; our history teaches us that this area where this mine is located is immersed in our antiquity. Our oral history is situated along this river and in the land. There is a reason this river and county is called Menominee. We are "Kiash Matchitiwuk" - the Ancient Ones.

Cultural Properties:

It is important to emphasize that the Menominee Indian Tribe's creation began at the mouth of the Menominee River and later extended throughout Wisconsin, into Iowa and Minnesota. Our Tribe, unlike most other Tribes in Wisconsin, does not have a migration story. Our cultural identity is here where our villages occupied this territory and where our ancestors lay. Thousands of years of Menominee history, culture, and identity lay beneath the surface along the banks of the Menominee River and more importantly, within the footprint of the Back Forty Mine site. Today, much of our identity and occupation in this territory remains visible to the trained eye. For example, along the Menominee River and on the site where the proposed Back 40 Mine is to be located are Dance Rings, the Chalk Hill Mounds and Village sites, White Rapids mound site and the Backlund Mounds and Village sites. Some of these date as far back as 500 B.C. These are documented within the archeological and historical record and continue to be a significant source of study for our people and archeologists.

It is the view of the Tribe that the predictive models and site evaluation to identify cultural properties are unacceptably inadequate. The technical reports of the CCRG and 106 Groups are reconnaissance level surveys that provide only a basic overview. We are concerned with the level of testing, if any, of the predictive models. Furthermore, it is clear that evaluations have not been conducted on many sites. For those sites that have been evaluated, we do not agree with recommendations on which sites are eligible for the National Register of Historic Places. For example, there is existing evidence from work done by Bill Mognahan to indicate multiple building stages & episodes of the gardens. According to the technical reports, Me 61, the two miles of raised fields, are the only pristine raised fields left in Michigan.

To date, Section 106 of the National Historic Preservation Act has not been deemed to be applicable to the Project; however, the Tribe has serious concern about the potential impacts to historically and culturally significant sites, artifacts or remains located at or near the project site. While responsibility for issuing federal surface water discharge permits and wetlands permits has been delegated to the state, the federal trust responsibility owed to the tribes has not. Because the state permitting process does not afford the Tribes the same protections that would be available to them under Section 106, the Tribe seeks stipulations from Michigan DEQ, Office of the State Archeologist, and Michigan State Historic Preservation Officer that the valuable and irreplaceable sites, artifacts and human remains at issue will not be destroyed.

Below are additional comments that expand on the discussion above.

- The Tribe would like clarification from Michigan DEQ on what standards will guide their decisions relating to tribal trust issues, considering our Tribe's traditional cultural properties. Additionally, we are seeking clarification on what standards will protect and preserve identified and suspected burial sites. Moreover, we are asking that no ground be broken until these sites have been completely evaluated for listing qualification under the National Register of Historic Places.
- Little attention is given to Menominee history and prehistory at this location and the traditional ties of the Tribe to the Sixty Islands area. This topic needs to be further developed and incorporated into EIA cultural resources documents.
- If Menominee history and prehistory at this location and the traditional ties of the Tribe to Sixty Islands area were to be better developed the need for a formal Traditional Cultural Properties study program would be obvious. The Tribe has previously developed a Traditional Cultural Properties for the Wolf River and respectfully recommends that the

same should be compiled for the Menominee River. Study should meet the criteria outlined in various National Register bulletins, guidelines and texts but minimally should be carried out by Menominee speaker(s) fluent in their native language. The Scope of work for the Traditional Cultural Properties should include consultation with the Menominee Tribal Historic Preservation Officer and/or others whom he might wish to include.

- What specific procedures will be employed to guarantee formal identification, evaluation, and protection of these cultural resources venerated and held sacred by Menominee Tribal members? Why don't the Menominee have a significant role in determining significance for National Register of Historic Places? The impact assessment is vague and more discussion needs to be directed to "unevaluated,", "eligible" and "not eligible" sites and the reasoning for this conclusion. Because so little is known about most of the sites within the project boundary it seems inappropriate to make management recommendations in the absence of comprehensive evaluation data. Dismissing a site described as a "lithic scatter" or because it "lacks diagnostic artifacts" is unacceptable.
- Predictive modeling or so-called "sensitivity zones" has limitations. Not enamored of the sensitivity model—there is insufficient discussion as required in Rule202 (1), (a), (iii) and Rule 202 (1), (e), (ii). We submit that the only test of the model is a vague statement of use in Northern Wisconsin and Minnesota "with success". This needs clarification and demonstration of validity of methods employed. Also we believe that remote sensing may have defined anomalies but those anomalies have not been adequately confirmed to be cultural or non-cultural.
- Rule 202 (2) requirements of sub-rule (1) (a) and (b) of this rule apply to natural and human-made conditions and features including but not limited to, the following. [Note: following are the two sub-rules for which the MITW needs additional information and clarification.]
    - (a) Topography—we believe that the topography of the mine locale has been significantly altered by the Menominee and their ancestors. There is no doubt that the topography with its extensive raised agricultural fields and multiple mound groups and village sites can be characterized as a cultural or as an archaeological landscape. This needs to be directly addressed in the cultural resources document.
    - (p) Residential dwellings, places of business, places of worship, schools, hospitals, government buildings, or other buildings used for human occupancy all or part of the year.

  There should be no doubt that the Menominee River generally and specifically the Sixty Islands locality are places of worship in every sense of the word. The topography referenced in subparagraph (a) above would include summer bark lodges known to have been utilized by the Menominee of the ethnographic present and their prehistoric ancestors during the so-called "Late Prehistoric" eras. Placement and archaeological signatures of these structures should be part of any evaluation phase.
- Characterization of 47Me61 and its associated components are incomplete and distorted. Data that were not available to CCRG and 106 Group have been compiled through the cooperative efforts of the Menominee Indian Tribe of Wisconsin, College of the Menominee Nation, and Menominee Tribal Enterprise during the past several years. On-going research both on and off the Menominee Reservation provides new information regarding an adaptive strategy best described as "agro-forestry". There is also new information regarding models of settlement that may serve to differentiate between eastern Wisconsin "Oneota" or "Upper Mississippian" groups and their interaction with regional Late Woodland populations.

[Note: Menominee Indian Tribe of Wisconsin is willing to share this information with the applicants and their consultant(s) to ensure that their presence on the Menominee River throughout is addressed—the 1836 Treaty confirmed Menominee ownership of territory held exclusively for the Tribe's use and territories where seasonal resources were shared with other ethnicities. Furthermore, the Menominee Tribe never relinquished its usufruct rights in this territory ceded to the United States.]

- Densmore (1932) in her BAE Bulletin notes a tradition of pictographs made by twins on a quest on a west-facing rock outcrop—the reference is at "Menominee Falls." Are there pictographs on the Menominee River; and, is there another place-name for Menominee Falls on the Menominee River. The reference to these pictographs is in Densmore (1932, also 2015 reprint of *Menominee Music).*

Environmental:

The application for a permit to construct and operate the Back 40 Mine submitted by Aquila Resources (AR) should be required to provide additional information in multiple areas, and does not currently meet the requirements of Michigan's Nonferrous Metallic Mining Regulations (Part 632). We respectfully submit the following comments to the proposed permit.

- With regard to the possibility of negative impacts to surface water, the Environmental Impact Statement (EIS) states in §§ 3.5.2. & 3.5.4. that it will comply with the requirements of the Michigan Mining Regulations. However, the requirement is that when there is an unpermitted or unplanned release to surface water, a permittee must "implement a plan for response activity." Aquila Resources should be required to develop a more detailed plan for spills or releases of hazardous materials, particularly as the surface water in the Project Area currently is not contaminated.
- Water quality testing parameters are listed in Mine Permit Application (MPA), Volume I, Table 2-1, what factors were used in determining the list of parameters? What schedule is used to identify the parameters?
- What monitoring results will equate to changes in the noted parameters list in Table 2-1? Currently the list is indicated to have been developed based on baseline studies, but no other descriptions are provided. Please provide a description of what will determine the changes to the parameter list in Table 2-1.
- Mine Permit Application (MPA), Volume I, Section 3 Operations Water Quality Monitoring; this section is very general and does not define "operations water," which leads to confusion over the remaining language within the short section. Are samples collected from surface and groundwater at the identified locations? The plan indicates that chemical composition as a result of monitoring will assist in calibration of the water quality model predictions. There is no reference to what the model is or if it has already been developed based on the baseline data. Additionally there is no reference of how the National Pollutant Discharge Elimination System (NPDES) permit is being developed and how any of the baseline or operations monitoring will accommodate the permit development and compliance.
- Mine Permit Application (MPA), Volume I, Section 5; Surface Water Monitoring does not specify the sampling design or SOP's, only reference provided to R 425.406.
- Mine Permit Application (MPA), Volume I, Section 5.1 Monitoring Locations does not specify what the designed locations will be assessing as far as "potential impacts"? If locations are built around specific impacts, then they should be outlined in this section. For example; if turbidity is one of the parameters that are a "potential impact" then monitoring locations should be placed in an appropriate location so as not to biased the sample.

- Mine Permit Application (MPA), Volume I, Section 5.2.1 Surface Water Elevation Monitoring; what is the existing SOP? It is not clear from this description exactly how measurements will be taken and what quality assurances are in place.
- Mine Permit Application (MPA), Volume I, Section 5.2.2 Surface Water Quality Monitoring; there is reference to the DEQ Operational Memo, but that document isn't included for review. Please provide DEQ Operational Memo.
- The EIS states at § 3.6.4. That Aquila Resources (AR) does not expect the mine to be impacted by any flooding and that there would be no negative impact to the floodplain resulting from the mine. This statement is insufficient and the mine should be required to have a plan in place to deal with any flooding, including contingencies for a dam break upstream.
- The EIS § 3.10.2.3 states that the improvement of existing roads may be required to support the project. This issue needs to be addressed in depth, including any required permitting and/or public review process which should include analysis of any impacts that may be caused by road construction activity.
- In the EIS § 3.11.2, Aquila Resources (AR) states that there are "no public recreation areas located close to the property that will be affected by the proposed mining activities." However, it does not address the potential impacts of an unexpected release into ground or surface waters that may impact Shakey Lakes Park and its surrounding environment, and the loss of use of this park as a result. Decline in use of the park may result from the loss of public trust, which likely will result in loss of revenue to local businesses and units of government. In fact, the application does not address any possible negative secondary impacts to the surrounding community such as decreased use of use of the Menominee River, Shakey Lakes Park or other bodies of water or public lands for fishing, swimming or other recreation due to pollution or perception of pollution. Nor does the application address the likely economic impact due to loss of fishing, hunting, and camping tourism caused by the changed land use and associated public perception, and the reduction of property values of the landowners surrounding the mine or adjacent to potentially affected bodies of water. In fact, Aquila Resources (AR) rather cheerily suggests in EIS § 3.12.3. that any impacts to the land use in the surrounding area should be "relatively unaffected or affected in a positive manner." However, in Section 63202(c), the State of Michigan has acknowledged that waste materials associated with mining operations such as the proposed Back 40 mine, if "not properly managed and controlled,[...] can cause significant damage to the environment, impact human health, and degrade the quality of life of the impacted community." As discussed above, degradation of the quality of life of the impacted community has not been addressed in the permit application. While it is everyone's hope that releases of hazardous substances do no occur, it is the responsibility of Aquila Resources (AR) to fully assess such possibilities, and it is the responsibility of Michigan Department of Environmental Quality (DEQ) to ensure that it does so. Aquila Resources' dismissal of the very real possibility of environmental and economic damages with a one-paragraph assurance that the area will be "relatively unaffected" does not meet the requirements of Part 632.
- The groundwater flows either into the Menominee River or into Shakey Lakes then to the River. Is there a realistic way to prevent acid rock drainage and metal leachate from the mine from entering the Menominee River and nearby lakes through the groundwater over the long term?
- Which power company will supply power to the Project?
- What is the current status of the Air Use Permit, National Pollutant Discharge Elimination System (NPDES) Permit and Wetland Permit Applications?

- There is a reference to the National Pollutant Discharge Elimination System (NPDES) contained within Volume 1, to the Foth (2015b) NPDES application, but this document is not available for review within the mine permit application.
- If the application has not been prepared as part of the Mine Permit Application (MPA), then there should be specific language in the Mine Permit Application (MPA) detailing how the process is carried out and the associated schedule for the application/permit process.
- The Tribe would herein request that any public information available regarding the National Pollutant Discharge Elimination System (NPDES) permit application, in accordance with R 323.2117(2), draft and draft final permit, as well as any associated fact sheets, be provided to the Tribe immediately upon availability.
- According to the Mine Permit Application Volume I, Section 5.8.2.2, discharge volume is estimated at 1,080,000 gallons/day, which will enact the provisions of R 323.2121, indicating that the Department shall prepare and make available a fact sheet. The fact sheet requirements are listed in R 323.2122, but do not include information describing how the receiving waters standards may differ from the adjacent WI standards. Due to the immediate proximity of the WI waters, how will MDEQ comply with Wisconsin Water Quality Standards? The Tribe would request access to any pertinent information that the fact sheet lists for MI receiving waters and comparison to WI waters and compared to both States Water Quality Standards.
- The statement within section 5.8.2.2, "The WWTP will be designed such that the quality of the wastewater discharge will meet all numerical limits stipulated in the NPDES permit issued by MDEQ", is a general statement. What are the designated water quality standards that the quality of the discharge will have to meet?
- Pursuant to the Part 632 Regulations at Section 63202(4), a local unit of government may enforce ordinances, regulations, or resolutions affecting mining operations provided such ordinances, etc., do not duplicate, contradict, or conflict with Part 632. The local unit of government, Lake Township, in fact has a zoning ordinance, and a Mineral Extraction Ordinance. Nevertheless, Aquila Resources indicated in its permit application that no such ordinances apply to this project and has not addressed compliance with local zoning and Mineral Extraction requirements. AR should be required to address how it will comply with applicable local ordinances in its permit application.
- Pursuant to Section 63205(2) (c) (v), the proposed environmental protection plan shall include provisions to prevent acid-forming waste products from leaching into groundwater or runoff into surface water. While the application provides multiple mitigation measures, the long-term closure plan needs to clearly state how it will prevent leaching of acidic waste into groundwater. Is the proposed reclamation of the backfilled pit protective over the long term? Is the mine proposing to just dump limestone in the pit to neutralize the acidity? Is the effectiveness of the limestone diminished over time? Particularly as the post-closure proposal includes eventual flooding of the pit?
- Pursuant to Section 63205(2) (d), the application is supposed to include assessment of risk to the environment or public health and safety in the event of a potentially significant incident or failure. The application indicates in multiple places that risk of such incidents will be minimized via secondary containment, monitoring, etc. However, the application should address what happens to the water quality, aquatic life, flora, and what are the risks to the public health in the event of a catastrophic release into the river, groundwater, contamination of Shakey Lakes, etc. Merely stating that risk of such incidents is low is insufficient to provide actual information on the risks in the event such an incident does occur. The Contingency Plan at Appendix J only minimally addresses potential impacts of accidents or releases at the operation, and repeatedly characterizes potential impacts as

minimal. However, if there are accidental releases, there will be impacts and Aquila Resources should be required to discuss the actual impacts of such releases. Instead, the Contingency Plan repeatedly uses the same language to address each possible incident:

> *"Release of [pollutant] to the environment could pose a threat to wildlife in and near the Project Area by impacting surface water and/or groundwater quality. The Project Area is located in a remote, sparsely populated area, but a release of [pollutant] could potentially impact residents in the immediate vicinity of the Project Area by impacting surface water and/or groundwater quality."*

- This response provides almost no information as to what those impacts would be, how long the impacts would last, and whether the impacts could be reversed. This response does not meet the standard set forth in Section 63205(11)(b), which requires the applicant to make a showing that the operation will not pollute, impair, or destroy the air, water or other natural resources or public trust in those resources. In fact, it could be argued that the response clearly shows that there will be impairments to surrounding natural resources and/or the public trust in those resources, and fails to show whether such impairments would be corrected or permanent. The mine's proposed location in a remote area does not negate the responsibility to protect the surrounding resources; indeed, because of the current lack of impairments to the environment at the proposed site, Aquila Resources should be required to show that the environment will remain at least reasonably clean during and after operations and the provided Contingency Plan fails to do so. Discussing the mitigation of risk is not the same as assessing the damage in the event that risk mitigation measures fail and releases occur. In particular, Aquila Resources should assess the impacts to surrounding natural resources and public health both for catastrophic, one-time failures and for releases or leaks that may not be detected by the monitoring mechanisms and so continue over a long period of time. Pursuant to Section 63205(12), DEQ cannot approve a permit application if the proposed mining operation will pollute, impair, or destroy the air, water or other natural resources or public trust in those resources. The current application does not meet this standard.
- Pursuant to Section 63211(2), financial assurance requirements apply to all mining and reclamation operations, including remediation of any contamination of the air, surface water, or groundwater that is in violation of the permit. Appendix K of the application does not include financial assurance for remediation of contamination that violates the permit. Because of the mine's proximity to the Menominee River, Shakey Lakes and other bodies of water and the possibility of contamination of groundwater, Aquila Resources should be required to include in its Financial Assurances an adequate amount in the likely event that at some point during the construction, operation or post-closure period of the life of the mine, contamination to water in the vicinity of the operation will occur.
- Mine Permit Application (MPA), Volume I, Section 6 General Monitoring of Environmental Protection Measures; Are there other timelines for post-closure timelines to go beyond mine year 30? There are no descriptions of post-closure monitoring the Tailings Management Areas in this section.
- Mine Permit Application (MPA), Volume I, Section 9 Post closure Groundwater and Surface Water Monitoring; the plan indicates that monitoring of ground and Surface water will continue until mine year 30, but there are no other descriptions of what will occur after that point. The plan should identify what actions will be taken in the event of discovery of groundwater and surface water contamination. The plan should identify what the useful life of the liners in the Tailings and Waste Rock Management Facility is expected to be and what will the likely result of failure of liners equate to, listing catastrophic secondary.

Aquatic Life, Flora, Fauna:

- The EIS states in § 3.13. that hazardous spills may occur, and that "prompt cleanup and correction is incorporated into the plans," but does not assess actual results that may occur to aquatic life, flora or fauna in the event of such hazardous spills. Nor does it address how long such impacts may last, or how cleanup would be undertaken. This should be required, per Section 63205(2)(b), which requires the EIS for a proposed mine to include the potential impacts the proposed mining operation may have on the affected area, including, but not limited to, flora, fauna, hydrology, geology, and geochemistry. The application as a whole does not satisfactorily address the cumulative impacts of the mining operation as required under Rule 425.202(2).
- The application proposes the "rescue and relocation of listed mussels at the treated water discharge outfall" at EIS § 3.15.3. This indicates that the conditions for mussels will be negatively impacted—is Aquila Resources proposing to relocate affected mussels annually for the life of the mine? How will Aquila Resources identify and relocate affected mussels? Is this a typical solution for this sort of issue? Will United States Environmental Protection Agency be involved in managing the threat to this species? How will DEQ monitor whether AR is adequately protecting this species and whether, and how much, the mining operation is affecting the health and habitat of the listed mussels?
- During operations description indicates that monitoring will occur annually late summer to early fall for fresh water mussels. This seems very general in description and there should be specific reference to methods that will be used and what protocols will be established based on the goals of the sampling. It is unclear whether the sampling is just to "confirm baseline" and "document trends" or if the monitoring is to assess potential impacts and determine when the relocation efforts should take place as described above. Please add clarification and specific reference to methods, for example; *(Strayer, D. L., S. Claypool, and S. Sprague. 1997. Assessing unionid populations with quadrats and timed searches. Pages 163-169 in K. S. Cummings, A. C. Buchanan, C. A. Mayer, and T. J. Naimo, editors. Conservation and management of freshwater mussels II. Initiatives for the future. Upper Mississippi River Conservation Committee, Rock Island, Illinois*).
- Mine Permit Application (MPA), Volume I, Section 8 Monitoring of Flora, Fauna, Fish and Wildlife Habitats and Biodiversity; there is no mention of plans to address Northern Long-Eared Bat (NLEB), which is presently listed as a Federally Threatened Species under the Federal Endangered Species Act of 1973, in fact the report indicates that there have been no federally listed species identified. The Monitoring plan must be updated to address how the surveys will be conducted and what measures will be put in place to protect the Northern Long-Eared Bat (NLEB).
- Mine Permit Application (MPA), Volume I, Section 8.1.1 Aquatic Biota and Habitats; the statement, "treated water discharge from the facility is not anticipated to affect aquatic biota and habitats", is very general and nonspecific. There is no reference to support this statement.
- Mine Permit Application (MPA), Volume I, Section 8.1.2 Terrestrial Biota and Habitats Evaluation; there is reference to relocation of species prior to construction, but no reference to what type of methodology will be implemented for this plan. In many cases sensitive species are not able to be relocated, hence the reason they are listed as sensitive. Capture, movement and surrounding environmental conditions are all factors in survival of species that are captured and relocated. Generally, not all species are even able to be trapped successfully. This section does not address mortality and take of any listed species that

would be onsite, i.e. the Northern Long-Eared Bat. Taking of a federally listed species in prohibited unless very specific conditions can be met and generally a project with this size a scope would be challenged to meet such conditions for a species like the Northern Long-Eared Bat (NLEB).

- The last sentence discussed monitoring for confirmation of "baseline conditions' and "document trends" during operations. It will be impossible to confirm baseline conditions once operations have begun, as a disturbance this size and scope will likely have significantly changed most of the terrestrial biota patterns and habitat use in that area. Most wildlife will have moved away from the site due to habitat destruction or alteration, noise, lighting impacts and increased traffic.
- What effects with the mine have on lake sturgeon? The study at Attachment E-I merely stated that there was lake sturgeon in the area. Aquila Resources should be required to provide information on the effect the discharge into the Menominee River and any possible contaminants will have on the lake sturgeon population and the ongoing efforts to support the sturgeon population on the Menominee River. What other bodies of water in the state are comparable sturgeon habitats? Aquila Resources should be required to consult with N.E.W. Hydro Inc., The River Alliance of Wisconsin, U.S. Fish and Wildlife Service, the Wisconsin Department of Natural Resources, the Michigan Department of Natural Resources, and the Michigan Hydro Relicensing Team, and the Great Lakes Fishery Commission on whether the proposed mine will impact the fish passages on the Menominee River, work on which has been ongoing for more than ten years. The Lake Sturgeon is identified as a threatened species in Michigan, a species of special concern in Wisconsin, and a federal species of concern by the US Fish & Wildlife Service. Further, the sturgeon is of great cultural and spiritual significance to the Menominee Tribe and other tribes. Aquila Resources should be required to provide a fuller picture of potential impacts of its operations on this species, particularly in light of the current efforts to protect it and its habitat on the Menominee River. (See US Fish & Wildlife Service Finding of No Significant Impact on proposed construction of lake sturgeon passage facilities on the Menominee River (February 1, 2012) and Final Environmental Assessment (November 30, 2011) at: http://www.fws.gov/midwest/greenbay/hydropower/pdf/MenomineeRiverFishPassageEA.pdf)

Threatened and/or Endangered Species:

- The Mine Permit Application, Volume I – Threatened & Endangered Species 5.9 & Monitoring 5.10 does not include any reference or discussion on survey methods, occurrence, updated survey periods relating to the Northern long-eared bat (Myotis septentrionalis) or Gray Wolf (Canis Lupus) within the project area.
- It is not clear that all federally listed species were considered in the baseline surveys and no description has been provided to indicate that there are available habitats for several of the federally listed species.

EIS, Volume IIG, Appendix E – Biological Resources:

- Most of the studies and data were collected from 2007 to 2009, which seems relatively old for some parameters and results to be used today.
- The EIS p. ES-2 indicates that there are no aquatic macrophytic state endangered, threatened or special concern species identified in surveys on Resort, East or Baker Lakes, which apparently is only associated with the 2009 baseline data. Up to date surveys must be collected to assure that species composition hasn't changed and that methodologies for data collection are up to date and accurate. Cross reference should be made to assure that

any new species that have been added to the list of state or federal endangered, threatened or special concern species since 2009 have new surveys conducted for occurrence.

- EIS p. ES-3, it indicates that surveys 2008 and 2009 for mussels species have found two on state endangered species list (black sandshell and hickorynut) and one on the threatened list (slippershell) and two on species of concern list (elktoe and round pigtoe). No Federally listed species have been found. Up to date surveys must be collected to assure that species composition hasn't changed and that methodologies for data collection are up to date and accurate. Cross reference should be made to assure that any new species that have been added to the list of state or federal endangered, threatened or special concern species since 2009 have new surveys conducted for occurrence.
- Fishery surveys in the Menominee River indicate that the only listed species is lake sturgeon, which is listed as state threatened. Up to date surveys must be collected to assure that species composition hasn't changed and that methodologies for data collection are up to date and accurate. Cross reference should be made to assure that any new species that have been added to the list of state or federal endangered, threatened or special concern species since 2009 have new surveys conducted for occurrence.
- Fish contaminant tissue testing results were considered low for all water bodies sampled, yet there is reference in the water quality sampling results that there were high results for mercury detected in several samples. A summary should be provided that correlates mercury detections in surface waters with results listed for all fish species included in the sample set. In addition fish contaminant sampling should be designed to fish targeted for consumption and the appropriate size classes of those species. According to the report, Aquatic Biota Report, Environmental Baseline Studies, Aquatic Resources Inc. Oct. 2011, fish species were collected based on taxa present at the time of sampling, which limits the ability to acquire representative samples that would provide a quality data set to adequately assess the potential for contribution to fish contaminants in the surrounding water bodies.